

ABSTRACT OF THE DISCLOSURE

A method of forming deep holes and a gundrill therefore is disclosed. The gundrill has an elongate
5 tubular shank and a cutting tip, each provided with a
tubular central region supplying pressurized drilling fluid
and a non-circular fluid cross-section defining a drilling
fluid return path in conjunction with the hole being formed.
The cutting tip flute defines a primary rake surface
10 terminating in an offset point, and a secondary flank
surface for forming an outlet with the hole being drilled,
sized to maintain fluid pressure in the bottom end space to
cool the cutting surfaces and to effectively remove chips as
they are formed. A localized relief passage, sized relative
15 to the outlet passage to cause a significant amount of
drilling fluid to flow therethrough, is formed behind a
peripheral rake edge of the primary rake surface for
drilling fluid to exit the end space and cool the tip.